REMARKS

Applicants request reconsideration of the rejection.

Claims 1-6 and 10-16 are now pending.

The drawings have been corrected to designate Figs. 2 and 3 as prior art as required by the Examiner on page 2 of the Office Action. A Transmittal of Formal Drawings accompanies this Reply.

A new title of the invention has been provided as required by the Examiner on page 2 of the Office Action.

The disclosure has been corrected to address the informalities noted by the Examiner on page 2 of the Office Action, and to improve the clarity of other passages, without introducing new matter.

Claims 2, 3, 5, and 6 were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claims have been amended, without narrowing their scope, to address the Examiner's concerns.

Claims 1 and 4 were rejected under 35 U.S.C. § 102(b) as being anticipated by the Applicants Admitted Prior Art (AAPA). The Applicants traverse as follows.

Based on the Applicants' reading of the Examiner's comments supporting the rejection, the Applicants consider that the limitation attempting to set forth the structure of the lead layer and upper lead layer may have not clearly described the differences from the prior art. Therefore, claims 1 and 4 have been amended to emphasize that the invention departs from the prior art in providing the lead layer (for example, layer 2 in Figure 1) and the upper lead layer (for example, layer 3 in Figure 1) so that, where the upper lead layer is in contact with the lead layer, the combined thickness (c) of the contacting lead layer and upper lead layer is less than the sum of the thickness (a) of the part of the lead layer that is not in contact with the upper lead layer, and the thickness (b) of the portion of the upper lead layer that is not in contact with the lead layer.

The Applicants refer to Figure 2, which illustrates schematically the prior art situation in which the upper lead layer 3 has a thickness (b) and the lead layer 2 has a uniform thickness (a). Thus, at the portion where the upper lead layer overlaps the lead layer, the combined thickness of the overlapping layers is (c)=(a)+(b). On the other hand, as shown in Figure 1 for example, the thinned portion of the lead layer 2, overlapped by upper lead layer 3, permits an overall

thinning of the overlapping portion (i.e., reduction in (c)) in comparison to the prior art. Thus, the present invention has the advantage that the upper readgap layer adheres well to the upper lead layer, avoiding short-circuiting problems of the prior art while retaining the advantages of the stepped upper lead layer/lead layer/MR sensor layer.

Claims 2 and 5 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Shingo and further in view of Shouji et al U.S. Patent No. 5,907,459 (Shouji). The Applicants traverse as follows.

Claims 2 and 5 have been drafted based on the relation (d)<(e) illustrated in Figure 4 and described in the specification between page 13, line 24 and page 14, line 9. Although claims 2 and 5 inherit the patentability of independent claims 1 and 4, respectively, the dependent claims have separate patentability in the construction in which the lower shield layer has a length ((d) in Figure 4) that does not exceed the dimension (e) of the lead layer/MR sensor. Shouji, on the other hand, shows a lower shield 16 that is wider than the thin lead 58a shown in Figures 10 and 11 of Shouji. Therefore, claims 2 and 5 are patentably distinguishable form Shouji.

Claims 3 and 6 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Shingo and further in view of Seagle U.S. Patent No. 5,764,446 (Seagle). The Applicants traverse as follows.

Claims 3 and 6 are also dependent from claims 1 and 4, respectively, and inherit the patentability of those claims. In addition, by providing at least one additional protective layer as claimed, the invention achieves greater protection against short-circuiting. Seagle does not show any corresponding protective layer.

In the Office Action, the Examiner refers to a protective undercoat layer, but the layers are not in correspondence. Note that the undercoat 320 of Seagle corresponds to the undercoat layer 11 shown, for example, in Figures 4 and 8-10 of the present application. Seagle does not show a layer corresponding to either of the lower protective layers or upper protective layers set forth in the claims. See, by way of example, lower protective layer 12 and upper protective layer 13 in the present drawings.

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In view of the foregoing amendments and remarks, the Applicants request reconsideration of the rejection and allowance of the claims.

Respectfully submitted,

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